



**COUNTY OF
CHESTERFIELD
VIRGINIA
MEMO**

TO: Members of the Planning Commission
Kirkland A. Turner, Director of Planning
R. J. "John" McCracken, Director of Transportation

FROM: Jeffrey L. Mincks, Deputy County Attorney

DATE: September 4, 2007

RE: Impact Fee Work Session Information

Attached to this e-mail memorandum are 1) the proposed impact fee Road Improvement Plan with accompanying map, showing road needs projected 20 years into the future; 2) a PowerPoint presentation explaining the methodology for the calculation of impact fees; and 3) a draft impact fee ordinance. The ordinance is drafted with certain assumptions:

1. that impact fees will only be imposed on residentially-zoned property;
2. that new residential zoning will address its impact on public facilities through cash proffers or other means;
3. that there will be a single impact fee service area encompassing the entire County;
4. that property for which cash proffers or CDA/service district funds will be paid for transportation improvements will be exempted from the payment of impact fees;
5. that an appeal of an impact calculation (mandated by statute) will be heard by the BZA and the appeal must be filed within 30 days of the calculation;
6. the methodology for calculating impact fees is consistent with the methodology explained in the attached PowerPoint presentation;

7. If a developer elects to use the statutorily-mandated installment payment option to pay his fees, the unpaid balance will accrue interest at the rate specified in the County Code for other unpaid accounts.

The remaining provisions of the ordinance are required by the new legislation. The Commission will be asked to set the public hearing for its October regular meeting to consider 1) the amendment of the comprehensive plan to include the Road Improvement Plan, the accompanying map and the designation of the impact fee service area(s), and 2) the impact fee ordinance.

All of the attached items will be discussed during a work session at the Commission's September regular meeting. Staff will also address the additional notification by mail of potentially interested landowners as was discussed at the last Commission meeting.

Attachments

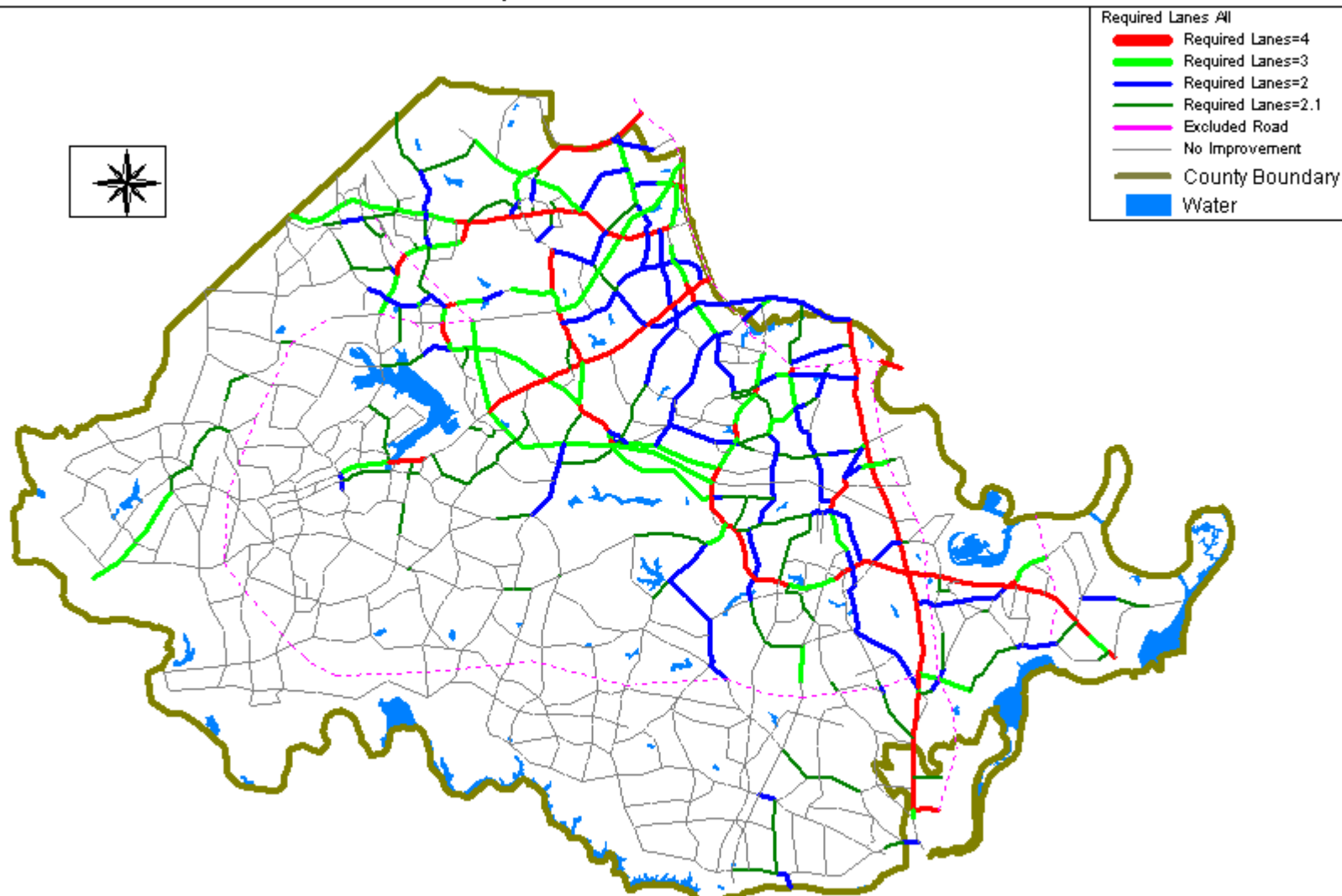
DRAFT IMPACT FEE ROAD IMPROVEMENT PLAN
"NON-SMOOTHED"
8/20/2007

ROAD	FROM	TO	WIDEN TO # LANES
288	POWHITE PARKWAY	ROUTE 10	6
ALVERSER DRIVE	MIDLOTHIAN TURNPIKE	HUGUENOT ROAD	4
ARCH ROAD	MIDLOTHIAN TURNPIKE	REAMS ROAD	4
ASHBROOK PARKWAY	ASHLAKE PKWY	OTTERDALE ROAD	2
BAILEY BRIDGE ROAD	DEER RUN	CLAYPOINTE ROAD	2
BALDWIN CREEK ROAD	HULL STREET ROAD	ASHLAKE PARKWAY	4
BEACH ROAD	NASH ROAD	ROUTE 10	6
BEACH ROAD	NASH ROAD	WOODLAND POND	2
BEACH ROAD	BUNDLE ROAD	SECOND BRANCH	2
BELMONT ROAD	WHITEPINE ROAD	JESSUP ROAD	4
BERMUDA HUNDRED ROAD	ENON CHURCH ROAD	ALLIED ROAD	2 & 4
BEULAH ROAD	SALEM CHURCH ROAD	HOPKINS ROAD	6
BEULAH ROAD	KINGSLAND ROAD	SALEM CHURCH ROAD	2
BEULAH ROAD	HOPKINS ROAD	MEADOWDALE BLVD	4
BOULDERS BLVD	MIDLOTHIAN TURNPIKE	JAHNKE ROAD	6
BUFORD ROAD	FOREST HILL AVENUE	MIDLOTHIAN TURNPIKE	4 & 6
CENTERPOINTE PARKWAY	OLD HUNDRED ROAD	288	4 & 8
CENTRALIA ROAD	ROUTE 10	CHALKLEY ROAD	2
CENTRALIA ROAD	CHALKLEY ROAD	CHESTER ROAD	4
CHALKLEY ROAD	CENTRALIA ROAD	ROUTE 10	2
CHARTER COLONY PKWY	GENITO ROAD	POWHITE PARKWAY	8
CHESTER ROAD	JEFFERSON DAVIS	NORMANDALE	4
CHESTER ROAD	NORMANDALE	CENTRALIA ROAD	8
CHESTER ROAD	CENTRALIA ROAD	RR R/W	6
CHESTER ROAD	RR R/W	ROUTE 10	4
COURTHOUSE ROAD	REAMS ROAD	HULL STREET ROAD	8
COURTHOUSE ROAD	HULL STREET ROAD	GENITO ROAD	6
COURTHOUSE ROAD	GENITO ROAD	288	8
COURTHOUSE ROAD	288	ROUTE 10	6
COURTHOUSE ROAD EXT	ROUTE 10	SALEM CHURCH ROAD	2
CRANBECK ROAD	ROBIOUS ROAD	KOGER CENTER BLVD	4
EASTFAIR DRIVE	NASH ROAD	WOODPECKER ROAD	4
ELKHARDT ROAD	PROVIDENCE ROAD	HULL STREET ROAD	4
ENON CHURCH ROAD	RUFFIN MILL ROAD	POINT ROCKS ROAD	4
ENON CHURCH ROAD	POINT ROCKS ROAD	ROUTE 10	6
EW ARTERIAL	MIDLOTHIAN TURNPIKE	OTTERDALE ROAD	2
EW ARTERIAL	OTTERDALE ROAD	DRY BRIDGE ROAD	4
EW ARTERIAL	DRY BRIDGE ROAD	OLD HUNDRED ROAD	2
FOREST HILL AVENUE	HUGUENOT ROAD	COUNTY LINE	4
GENITO ROAD	WOOLRIDGE ROAD	BRANDERMILL PARKWAY	2
GENITO ROAD	BRANDERMILL PARKWAY	CHARTER COLONY PKWY	4
GENITO ROAD	CHARTER COLONY PKWY	HULL STREET ROAD	6
GENITO ROAD	HULL STREET ROAD	COURTHOUSE ROAD	6
HAPPY HILL ROAD	HARROWGATE ROAD	JEFFERSON DAVIS	4
HARROWGATE ROAD	ROUTE 10	HAPPY HILL ROAD	4
HARROWGATE ROAD	JEFFERSON DAVIS	EAST WEST FREEWAY	2
HICKORY ROAD	NORTH SOUTH FREEWAY	MATOACA ROAD	4

HOPKINS ROAD	CHIPPENHAM PKWY	BEULAH ROAD	6
HOPKINS ROAD	BEULAH ROAD	OLD LANE	4
HOPKINS ROAD	CHIPPENHAM PKWY	COUNTY LINE (NORTH)	2
HUGUENOT ROAD	ROBIOUS ROAD	COUNTY LINE	8
HUGUENOT ROAD	ROBIOUS ROAD	KOGER CENTER BLVD	6
HULL STREET ROAD	COUNTY LINE (WEST)	POWHITE PARKWAY	6
HULL STREET ROAD	OTTERDALE ROAD	WOODLAKE PKWY	6
HULL STREET ROAD	WOODLAKE PKWY	SPRING RUN ROAD	8
HULL STREET ROAD	288	COUNTY LINE	8
JAHNKE ROAD	BUFORD ROAD	CHIPPENHAM PKWY	4 & 6
JEFFERSON DAVIS	COUNTY LINE (NORTH)	COUNTY LINE (SOUTH)	8
JESSUP ROAD	BELMONT ROAD	ROUTE 10	2 & 4
KINGSLAND ROAD	HOPKINS ROAD	CHESTER ROAD	4
KINGSLAND ROAD	ROUTE 10	HOPKINS ROAD	2
KINGSLAND ROAD EXT	ROUTE 10	BELMONT ROAD	4
LEWIS ROAD	CARVER HEIGHTS	RR R/W	2
LEWIS ROAD	ROUTE 10	CARVER HEIGHTS	4
LUCKS LANE	288	COURTHOUSE ROAD	4 & 6
MATOACA ROAD	RIVER ROAD	HICKORY ROAD	2
MEADOWDALE BLVD	HOPKINS ROAD	JEFFERSON DAVIS	4
MEADOWVILLE ROAD	ROUTE 10	I-295	6
MIDLOTHIAN TURNPIKE	COUNTY LINE	WOOLRIDGE ROAD	6
MIDLOTHIAN TURNPIKE	WOOLRIDGE ROAD	BOULDERS BLVD	8
MT. HERMON ROAD EXT	NORTH SOUTH ARTERIA	DUVAL ROAD	2
NASH ROAD	BEACH ROAD	EASTFAIR DRIVE	4
NASH ROAD	WINTERPOCK ROAD	EASTFAIR DRIVE	2
NEW ROAD	WOOLRIDGE ROAD	OLD HUNDRED ROAD	2
NEWBY'S BRIDGE ROAD	HULL STREET ROAD	COGBILL ROAD	4
NEWBY'S BRIDGE ROAD	COGBILL ROAD	BELMONT ROAD	2
NEWBY'S BRIDGE ROAD	QUALLA ROAD	288	2
NORTH SOUTH ARTERIAL	DUVAL ROAD	SKINQUARTER ROAD	2
NORTH SOUTH ARTERIAL	SKINQUARTER ROAD	HULL STREET ROAD	2
OLD BERMUDA HUNDRED	JEFFERSON DAVIS	ROUTE 10	4
OLD BON AIR ROAD	ROBIOUS ROAD	BUFORD ROAD	4
OLD BUCKINGHAM ROAD	MIDLOTHIAN TURNPIKE	ALVERSER DRIVE	2
OLD CENTRALIA ROAD	CHESTER ROAD	ROUTE 10	4
OLD HUNDRED ROAD	NEW ROAD	DRY BRIDGE ROAD	2
OLD LANE	HOPKINS ROAD	CHESTER ROAD	4
OLD STAGE ROAD	ROUTE 10	WARE BOTTOM SPRING	2
OSBORNE ROAD	ROUTE 10	JEFFERSON DAVIS	4
OTTERDALE ROAD	288	MIDLOTHIAN TURNPIKE	2
PICKETT AVENUE	RIVER ROAD	COUNTY LINE (SOUTH)	4
PINETTA DRIVE	MIDLOTHIAN TURNPIKE	BUFORD ROAD	2
POCOSHOCK BLVD	MIDLOTHIAN TURNPIKE	HULL STREET ROAD	4
POWHITE PARKWAY	COURTHOUSE ROAD	CHIPPENHAM PKWY	6
PROVIDENCE ROAD	MIDLOTHIAN TURNPIKE	COURTHOUSE ROAD	4
QUALLA ROAD	288	COURTHOUSE ROAD	2
QUALLA ROAD	288	SPRING RUN ROAD	4
REAMS ROAD	COURTHOUSE ROAD	HULL STREET ROAD	2 & 4
RIVER ROAD	HICKORY ROAD	COUNTY LINE (EAST)	2 & 4
RIVER ROAD	MATOACA ROAD	NORTH - SOUTH FREEWAY	2

ROBIOUS ROAD	HUGUENOT ROAD	COUNTY LINE	6
ROBIOUS ROAD	HUGUENOT ROAD	MIDLOTHIAN TURNPIKE	6
ROUTE 10	CHIPPENHAM PKWY	WHITEPINE ROAD	6
ROUTE 10	WHITEPINE ROAD	CHALKLEY ROAD	8
ROUTE 10	CHALKLEY ROAD	ECOFF ROAD	6
ROUTE 10	ECOFF ROAD	COUNTY LINE (EAST)	8
RR R/W	EAST WEST FREEWAY	LEWIS ROAD	6
RUFFIN MILL ROAD	JEFFERSON DAVIS	CONTINENTAL BLVD	6
RUFFIN MILL ROAD	CONTINENTAL BLVD	ENON CHURCH ROAD	2
SALEM CHURCH ROAD	BEULAH ROAD	CENTRALIA ROAD	4
SALISBURY ROAD	WINTERPOCK ROAD	ROBIOUS ROAD	2
SPRING RUN ROAD	QUALLA ROAD	HENSLEY ROAD	2
TURNER ROAD	HULL STREET ROAD	MIDLOTHIAN TURNPIKE	6
TURNER ROAD	HULL STREET ROAD	WALMSLEY BOULEVARD	8
TURNER ROAD	WALMSLEY BOULEVARD	BELMONT ROAD	6
WALMSLEY BOULEVARD	HULL STREET ROAD	COUNTY LINE	4
WHITE PINE ROAD	ROUTE 10	BELMONT ROAD	6
WINTERFIELD ROAD	MIDLOTHIAN TURNPIKE	SALISBURY ROAD	4
WINTERFIELD ROAD	SALISBURY ROAD	COUNTY LINE	2
WINTERPOCK ROAD	HULL STREET ROAD	SPRINGFORD	2
WOODPECKER ROAD	EASTFAIR DRIVE	EAST WEST FREEWAY	4
WOODPECKER ROAD	NORTH SOUTH FREEWAY	LAKEVIEW	2
WOODSEDGE ROAD	JEFFERSON DAVIS	ASHTON CREEK	4
WOOLRIDGE ROAD	MIDLOTHIAN TURNPIKE	288	6 & 8
WOOLRIDGE ROAD	288	POWHITE PARKWAY	6 & 8

Chesterfield Model
Required Lanes for All Roads



ROAD IMPROVEMENT PLAN

IMPACT FEE CALCULATION PROCEDURE

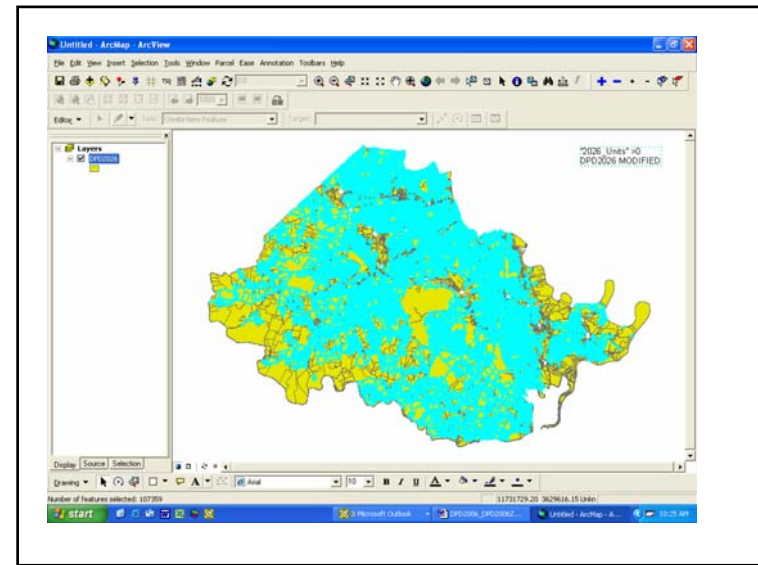
- LAND USE DATA BASE PROVIDED (EXISTING & 2026)
- DETERMINE ROAD NETWORK TO BE USED
- RUN TP+ MODEL TO DETERMINE ANTICIPATED TRAFFIC
- RUN COST CALCULATIONS TO ACHIEVE DESIRED LEVEL OF SERVICE (D)
- DETERMINE COST PER ADT

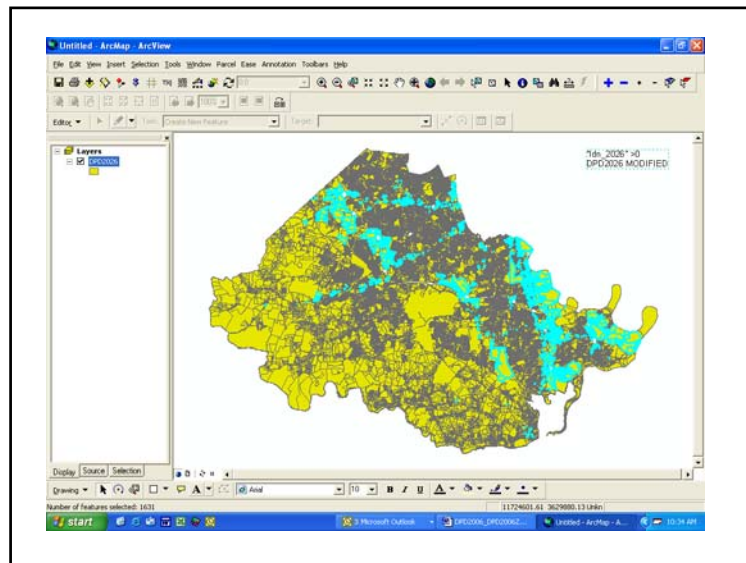
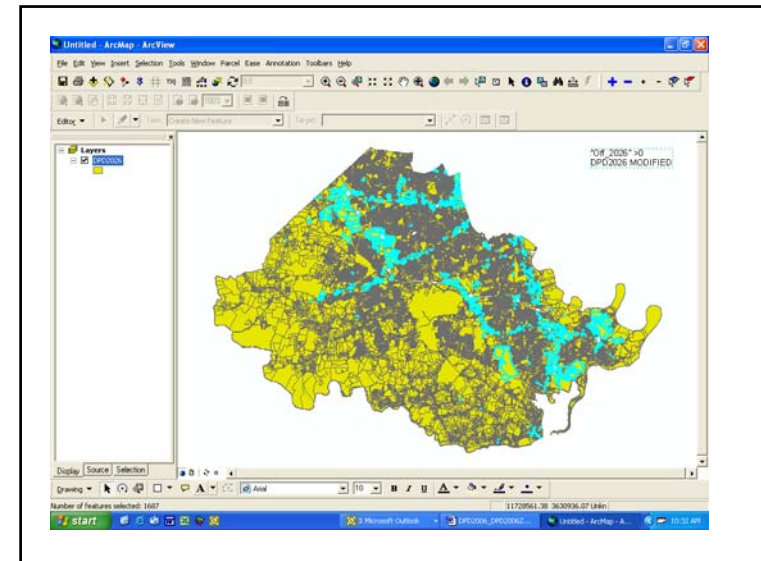
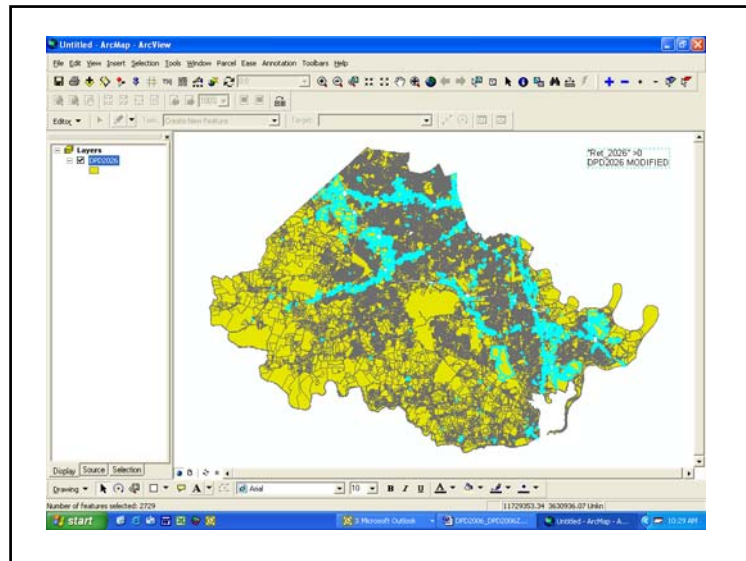
IMPACT FEE CALCULATION PROCEDURE

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- DETERMINE ROAD NETWORK TO BE USED
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- RUN COST CALCULATIONS TO ACHIEVE DESIRED LEVEL OF SERVICE (D)
- DETERMINE COST PER ADT

LAND USES

	UNITS	POPULATION	RETAIL SQ FT	OFFICE SQ FT	INDUSTRY SQ FT
2006	117,198	304,942	23,426,450	8,872,332	35,589,558
2006BASE *	117,198	329,522	25,759,154	9,131,032	36,304,445
2026	173,832	432,815	35,919,233	17,629,755	65,118,638





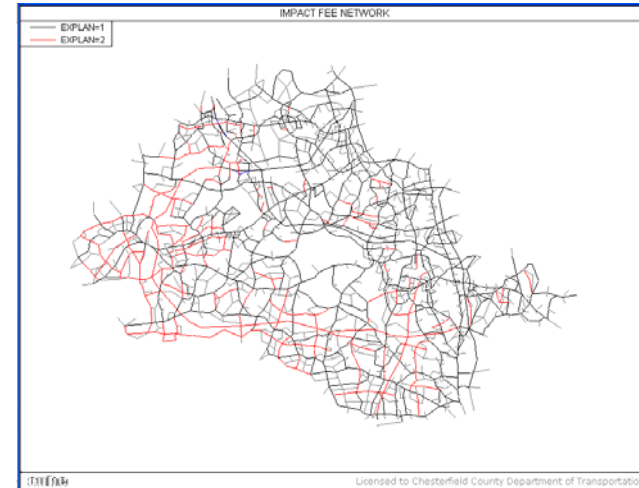
IMPACT FEE CALCULATION PROCEDURE

- LAND USE DATA BASE PROVIDED (EXISTING & 2026)
- **DETERMINE ROAD NETWORK TO BE USED**
- RUN TP+ MODEL TO DETERMINE ANTICIPATED TRAFFIC
- RUN COST CALCULATIONS TO ACHIEVE DESIRED LEVEL OF SERVICE (D)
- DETERMINE COST PER ADT

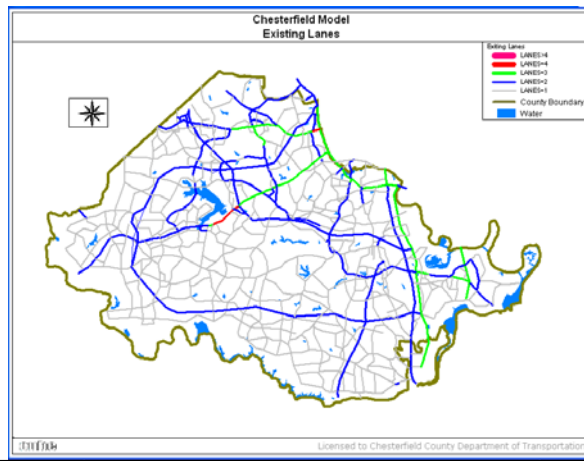
IMPACT FEE NETWORK

- INFINITE COMBINATION OF ROAD NETWORKS POSSIBLE
- ROAD NETWORK HAS SIGNIFICANT IMPACT ON ASSIGNMENT OF TRIPS AND COSTS
- ASSUMED ALL THOROUGHFARE PLAN IS IN PLACE

IMPACT FEE NETWORK



IMPACT FEE ASSUMED EXISTING LANES

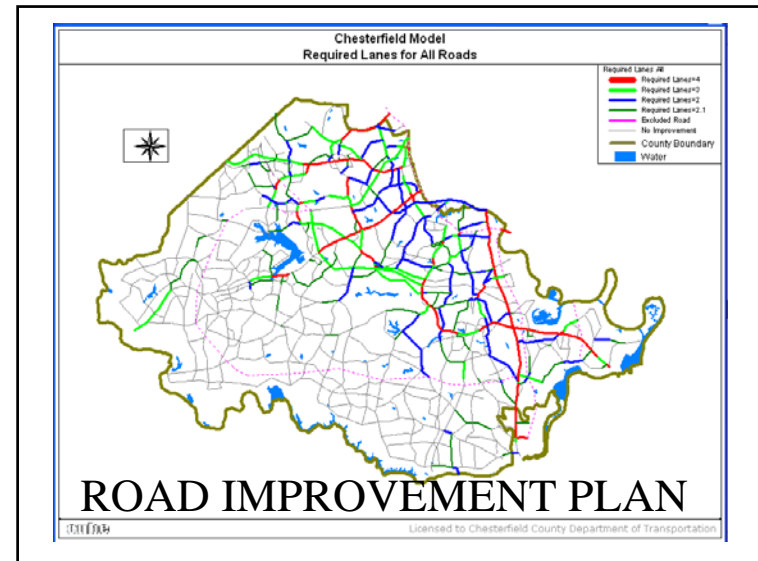


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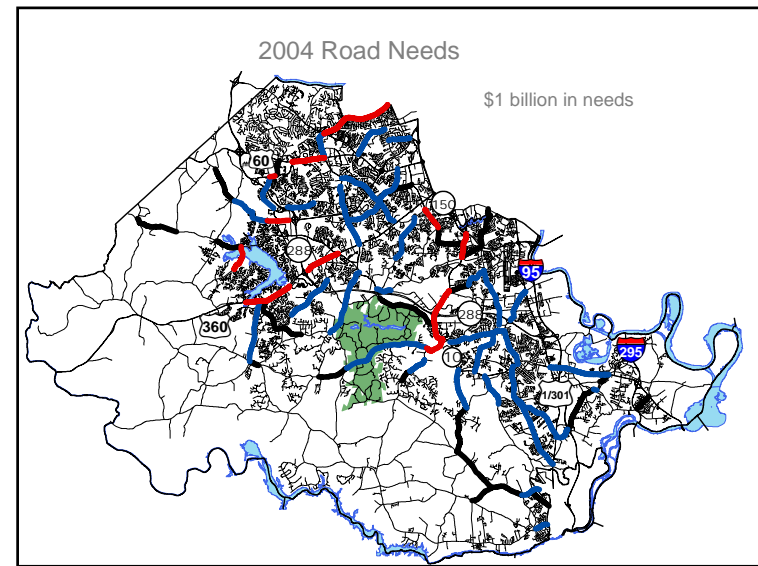
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- **RUN TP+ MODEL TO DETERMINE ANTICIPATED TRAFFIC**
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- DETERMINE COST PER ADT

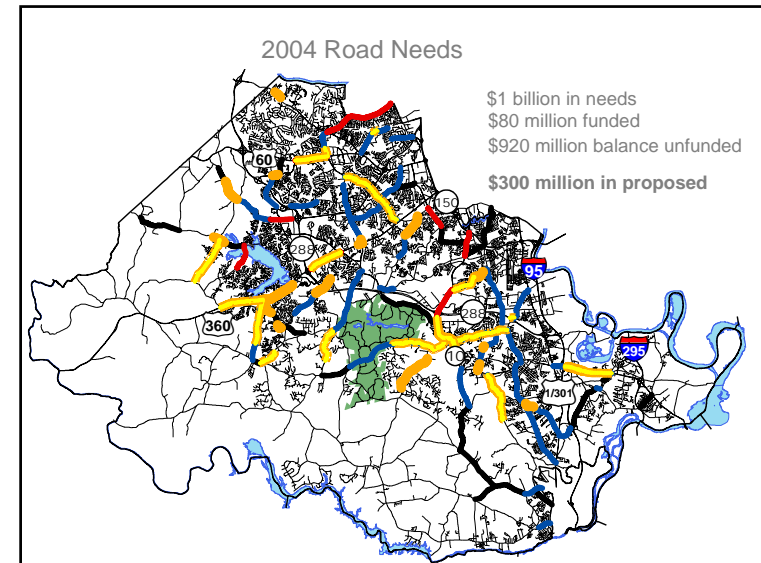
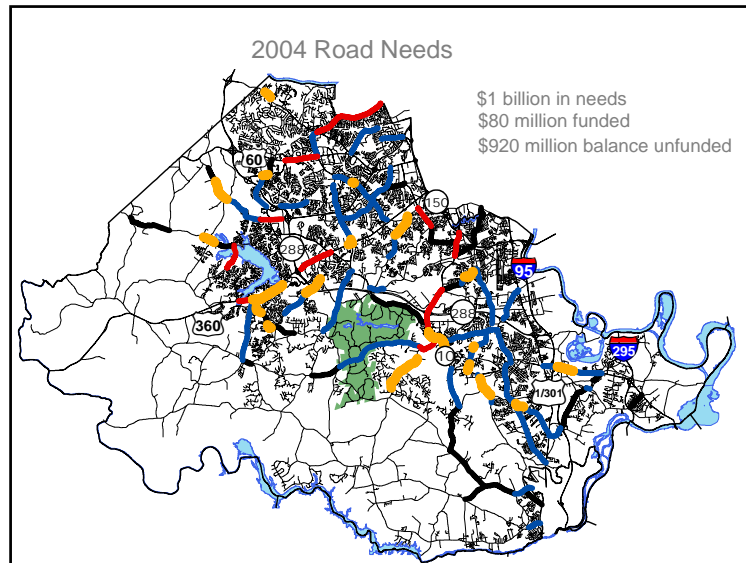
TP+ MODEL

- VARIABLES – DWELLINGS, POPULATION, RETAIL EMPLOYMENT, NON-RETAIL EMPLOYMENT, SCHOOL
- GENERATION
- DISTRIBUTION
- ASSIGNMENT



2004 EXISTING NEEDS & COSTS





IMPACT FEE CALCULATION PROCEDURE

- LAND USE DATA BASE PROVIDED (EXISTING & 2026)
- DETERMINE ROAD NETWORK TO BE USED
- RUN TP+ MODEL TO DETERMINE ANTICIPATED TRAFFIC
- **RUN COST CALCULATIONS TO ACHIEVE DESIRED LEVEL OF SERVICE (D)**
- DETERMINE COST PER ADT

IMPACT FEE MAXIMUM ROAD VOLUMES FOR LOS D

NON-FREEWAY	LESS THAN 8,000 VPD	NO IMPROVEMENT
	8,000 – 15,000 VPD	GOOD 2 LANES
	15,001 – 26,550 VPD	4 LANES
	26,551 – 39,750 VPD	6 LANES
	GREATER THAN 39,750 VPD	8 LANES
FREEWAY	0 – 58,000 VPD	4 LANES
	58,001 – 87,000 VPD	6 LANES
	GREATER THAN 87,000 VPD	8 LANES

IMPACT FEE TYPICAL ROAD IMPROVEMENT COSTS

GOOD 2 LANES	\$8.45 M / MILE
WIDEN 2 LANES TO 4	\$10.12 M / MILE
WIDEN 2 LANES TO 6	\$10.17 M / MILE
WIDEN 2 LANES TO 8	\$16.11 M / MILE
WIDEN 4 LANES TO 6	\$13.45 M / MILE
WIDEN 4 LANES TO 8	\$14.31 M / MILE
WIDEN 6 LANES TO 8	\$13.45 M / MILE

GOOD 2 LANES

NON-FREEWAY RECONSTRUCT 2 LANE

PROJECT	FROM	TO	BIDS RECEIVED	PROJECT COMPLETION DATE	MILES	COST
* Salem Church Road	Kingland Road	Beulah Road	Aug-03	Fall 04	0.82	\$4.35
* Old Bon Air Road	Ironmill Road	Groundhog Drive	Dec-03	Fall 04	0.22	\$1.21
* Hickory Road	Southern Road	Old Town Creek	Sep-04	Fall 05	0.30	\$1.34
* Old Buckingham Road	Mill Forest Drive	S. of Old Coalmine Rd	Apr-05	Fall 06	0.32	\$4.57
					<u>1.66</u>	<u>\$11.57</u>

Total Road Cost \$14.03 million
Miles 1.66 miles
Cost per mile **\$8.45** million/mile

* Completed project
** Under construction
*** Six Year Plan Estimate

Note: factored in inflation based on date bids received, inflation prior to 2004 was 2.8 % from PPI and inflation for 2004 (8.5%) and 2005 (12.6%) and 2006 (5.1%) avg = 8.73% .

Reconstruct 2 lanes

2 LANES TO 4

NON-FREEWAY Widen from 2 to 4 LANES

PROJECT	FROM	TO	BIDS RECEIVED	PROJECT COMPLETION DATE	MILES	COST
* Genito Road	Rte 360	South Ridge Dr	Jan-01	Dec 02	1.27	\$10.41
* Genito Road	South Ridge Dr	Fox Chase La	Sep-01	Aug 03	1.74	\$12.12
					<u>3.01</u>	<u>\$22.53</u>

Total Road Cost \$30.47 million
Miles 3.01 miles
Cost per mile **\$10.12** million/mile

* Completed project
** Under construction
*** Six Year Plan Estimate

Note: factored in inflation based on date bids received, inflation prior to 2004 was 2.8 % from PPI and inflation for 2004 (8.5%) and 2005 (12.6%) and 2006 (5.1%) avg = 8.73% .

Widen 2 to 4
4/27/2007

2 LANES TO 6

NON-FREEWAY Widen from 2 to 6 LANES

PROJECT	FROM	TO	BIDS RECEIVED	PROJECT COMPLETION DATE	MILES	COST
* Courthouse Road	Edenberry Dr	Cheryl Ann	Oct-96	1999	1.47	\$9.86
					<u>1.47</u>	<u>\$9.86</u>

Total Road Cost \$14.95 million
Miles 1.47 miles
Cost per mile **\$10.17** million/mile

* Completed project
** Under construction
*** Six Year Plan Estimate

Note: factored in inflation based on date bids received, inflation prior to 2004 was 2.8 % from PPI and inflation for 2004 (8.5%) and 2005 (12.6%) and 2006 (5.1%) avg = 8.73% .

Widen 2 to 6
4/27/2007

2 LANES TO 8

NON-FREEWAY Widen from 2 to 8 lanes

	(COST IN \$MMIL)
Cost for widening 2 lane to 6 lane	= \$10.17
Cost for 2 additional lanes, used	= \$2.82
RTE 10 EBL (618-1295) CONST CONTRACT yr 1998	
\$1.08mi/1.1mi = .98m for one la * second la = \$1.96	
inflation factor 2.8%/yr for 5 years and 8.73% for 3 years = \$2.82	
Additional Right-of-way	
(130 ft- 110 ft)*5280 ft/43560 /ac * 50 k =	\$0.12
Supplemental Right-of-way, purchase houses 6 to 8 lane	
10 houses/mi * \$150,000 ea. =	\$1.50
Utility adjustment, used Courthouse (Lucks to Edenberry) in 1998 was \$1.04	-
inflation factor 2.8%/yr for 5 years and 8.73% for 3 years = \$1.50	<u>\$1.50</u>
TOTAL	\$16.11
COST =	\$16.11

Note: factored in inflation based on date bids received, inflation prior to 2004 was 2.8 % from PPI and inflation for 2004 (8.5%) and 2005 (12.6%) and 2006 (5.1%) avg = 8.73% .

Widen 2 to 8
4/27/2007

4 LANES TO 6

NON-FREEWAY Widen from 4 to 6 lanes

PROJECT	FROM	TO	BIDS RECEIVED	PROJECT COMPLETION DATE	MILES	COST
* Route 360	Hicks Rd	Courthouse Rd	OCT 96	1999	2.00	\$17.74
				Total	2.00	\$17.74

Total Road Cost \$26.89 million
Miles 2.00 miles
Cost per mile \$13.45 million/mile

* Completed project
** Under construction
*** Six Year Plan Estimate

Note: factored in inflation based on date bids received, inflation prior to 2004 was 2.8 % from PPI and inflation for 2004 (8.5%) and 2005 (12.6%) and 2006 (5.1%) avg = 8.73% .

Widen 4 to 6
4/27/2007

4 LANES TO 8

NON-FREEWAY Widen from 4 to 8 lanes

PROJECT	FROM	TO	BIDS RECEIVED	PROJECT COMPLETION DATE	MILES	COST
** Route 360	Swift Creek Br	Winterpock Road	May-06		1.60	\$22.89
					1.60	\$22.89

Total Road Cost \$22.89 million
Miles 1.60 miles
Cost per mile \$14.31 million/mile

* Completed project
** Under construction
*** Six Year Plan Estimate

Widen 4 to 8
4/27/2007

NEW 4 LANE FREEWAY

FREEWAYS NEW 4 LANES

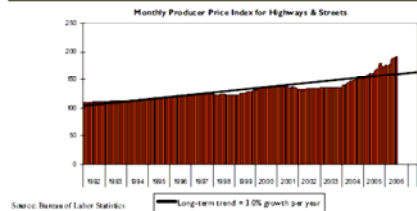
PROJECT	FROM	TO	BIDS RECEIVED	PROJECT COMPLETION DATE	MILES	COST
* Route 288	Powhite Parkway	North County Line	Nov-01	Fall 2004	7.30	\$214.93
				Total	7.30	\$214.93

Total Road Cost \$287.10 million
Miles 7.30 miles
Cost per mile \$39.33 million/mile

* Project complete
** Under construction
*** Six year plan estimate

New 4 lane Freeway
4/27/2007

Highway & Bridge Construction Input Prices - Price Change From Same Month in Preceding Year						
	July 05 to July 06	June 05 to June 06	May 04 to May 05	July 04 to July 05	July 03 to July 04	July 02 to July 03
Highway & Street Construction	15.3%	16.8%	16.4%	11.5%	9.2%	1.9%
Asphalt Paving & Block Mfg	34.1%	30.6%	27.6%	6.2%	2.6%	3.2%
Cement	12.2%	14.4%	16.1%	14.3%	2.2%	-0.6%
Concrete Block & Brick	8.3%	6.4%	7.5%	10.4%	2.2%	2.0%
Construction Machinery & Equipment Mfg	3.7%	4.0%	3.0%	4.7%	4.0%	1.3%
Construction Sand, Gravel & Crushed Stone	9.0%	7.9%	8.7%	6.7%	3.8%	2.1%
Iron & Steel Scrap	67.8%	74.4%	31.6%	-34.4%	99.2%	10.3%
Ready Mix Concrete	12.6%	13.1%	12.8%	13.9%	4.4%	0.3%
Inflation/Consumer Price Index	4.1%	4.3%	4.2%	3.2%	3.0%	2.1%
General Construction Inputs	9.1%	9.3%	9.6%	7.3%	8.5%	1.5%



IMPACT FEE COST CALCULATION

- COST MODEL TAKES ASSIGNED VOLUMES, DETERMINES NUMBER OF LANES REQUIRED TO MEET LOS FOR VOLUME, CALCULATES COST TO IMPROVE ROAD FROM EXISTING TO REQUIRED NUMBER OF LANES

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06/20/07

Scenario: HDO Shed Report includes: All Links
Chesterfield Cost Proffer System (Version 2.1)

Facility (* = multiple shed link)	Link Length (miles)	R/P	Existing Lanes	Base ADT	Base Req'd Lanes	Def Code	Projected ADT	Proj Lanes	Construction Cost W/TE Excluded Links	Cash Proffer Construction Cost	Scenario Construction Cost
** Traffic Shed 1											
1176 - 1707	0.14	E/P	4.0	64511	6.0	D	64511	6.0	0	0	1601600
1176 - 1708	0.27	E/P	4.0	63676	6.0	D	63676	6.0	0	0	3088800
1185 - 1663*	0.23	E/W	2.0	8554	2.1	D	8554	2.1	0	0	1774500
1187 - 1643	0.20	E/W	4.0	3540	4.0	A	3540	2.0	0	0	0
1187 - 1713	0.24	E/W	4.0	3540	4.0	A	3540	2.0	0	0	0
1188 - 1713	0.20	E/W	2.0	7302	2.0	A	7302	2.0	0	0	0
1188 - 1916	0.20	E/W	2.0	8797	2.1	D	8797	2.1	0	0	1690000
1190 - 1714	0.27	E/W	2.0	14282	2.1	D	14282	2.1	0	0	2281500
1190 - 1715	0.27	E/W	2.0	12483	2.1	D	12483	2.1	0	0	2281500

IMPACT FEE ADT DETERMINATION

- LAND USE ASSIGNED TO EACH PARCEL IS USED TO DETERMINE ITE TRIP RATE CATEGORY (SINGLE FAMILY, RETAIL, OFFICE, INDUSTRIAL)
- DENSITY FOR PARCEL MULTIPLIED TIMES ITE TRIP RATE TO GET TOTAL TRIPS

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Scenario: BDO Shed Report includes: All Links
Chesterfield Cost Proffer System (Version 2.1)

Link Length (miles)	Cash Proffer Construction Cost	Total Shed ADT
** Traffic Shed 1		
** Subtotal **		
27.80	0	182294
** Traffic Shed 2		
** Subtotal **		
24.78	0	150010
** Traffic Shed 3		
** Subtotal **		
28.61	0	173460
** Traffic Shed 4		
** Subtotal **		
27.69	0	179804

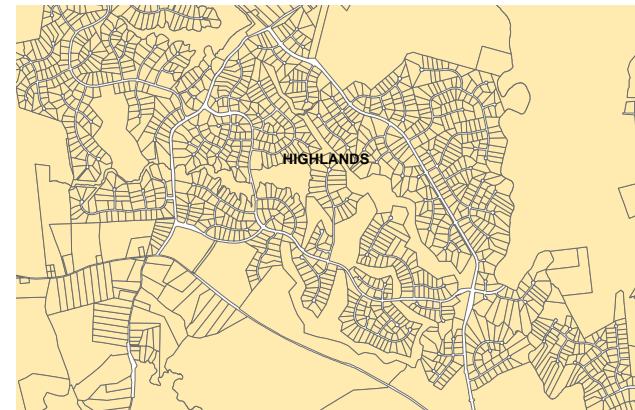
IMPACT FEE CALCULATION PROCEDURE

- LAND USE DATA BASE PROVIDED (EXISTING & 2026)
- DETERMINE ROAD NETWORK TO BE USED
- RUN TP+ MODEL TO DETERMINE ANTICIPATED TRAFFIC
- RUN COST CALCULATIONS TO ACHIEVE DESIRED LEVEL OF SERVICE (D)
- **DETERMINE COST PER ADT**

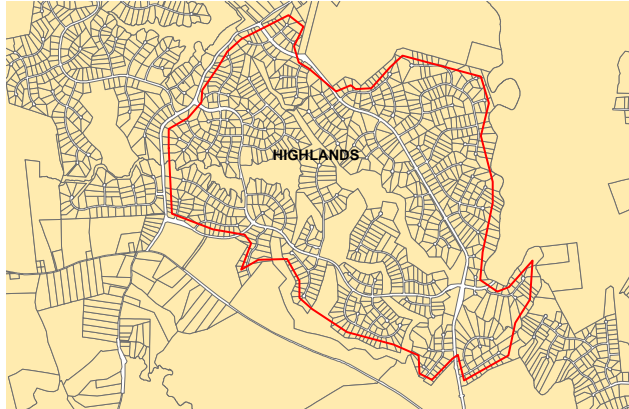
IMPACT FEE

COSTS		
2026		\$5,292 M
2006 BASE		\$4,686 M
DIFFERENCE		\$ 605 M
CREDITS		
IMPROVEMENTS		\$ 0 M
CASH PROFFERS 20 YRS		\$ 129 M
POWHITE / CHARTER COLONY		\$ 40 M
TOTAL		\$ 169 M
ADT'S		
2026		2,649,740
2006 BASE		1,898,010
DIFFERENCE		751,730
IMPACT FEE		
(\$605 M - \$169 M) / 751 K = \$582 / ADT	\$582 * 10 ADT / DW =	\$5,802 PER DW

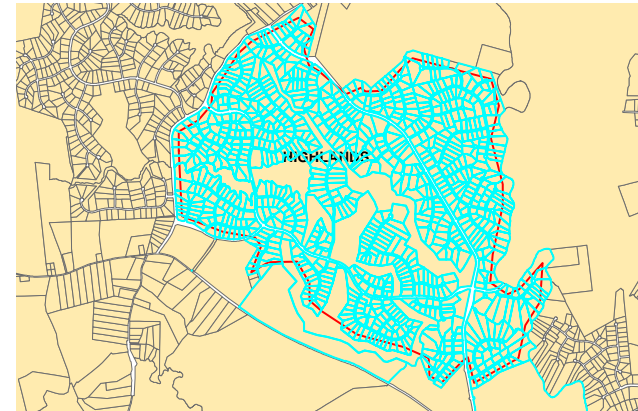
HIGHLANDS



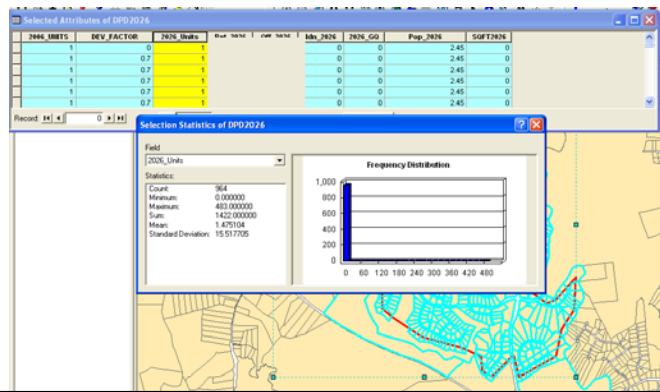
HIGHLANDS BOUNDARY



HIGHLANDS SELECTED LOTS



HIGHLANDS ZONED 2,000 UNITS 2026 1,422 UNITS



IMPACT FEE COMMERCIAL LAND USES

LAND USE	TYPICAL SIZE	ADT / 1,000 F2	FEE
OFFICE	60,000	15.0	\$523,800
OFFICE	20,000	19.3	\$224,652
CONVENIENCE	3,000	845.6	\$1,476,417
SHOPPING CENTER	200,000	49.28	\$5,736,192
INDUSTRIAL (HEAVY)	433,000	1.5	\$378,009
INDUSTRIAL (LIGHT)	130,000	7.0	\$529,620
BANK	4,500	239.33	\$626,805
FAST FOOD	4,000	496.0	\$1,154,688

DRAFT ONLY

AN ORDINANCE TO AMEND THE CODE OF THE COUNTY
OF CHESTERFIELD, 1997, AS AMENDED, BY ADDING
A NEW ARTICLE XVII TO CHAPTER 9 OF THE CODE
RELATING TO TRANSPORTATION IMPACT FEES TO FUND AND RECAPTURE
THE COST OF PROVIDING REASONABLE ROAD IMPROVEMENTS

BE IT ORDAINED by the Board of Supervisors of Chesterfield County:

(1) *That the Code of the County of Chesterfield, 1997, as amended, is amended by adding the following:*

**Chapter 9
FINANCE AND TAXATION**

ooo

ARTICLE XVII. TRANSPORTATION IMPACT FEES

Section 9-250. Establishing a system of impact fees.

Pursuant to Code of Virginia § 15.2-2322, the county hereby establishes a system of impact fees to fund reasonable road improvements benefiting new residential development. In accordance with Code of Virginia §15.2-2320, one or more impact fee service areas shall be designated by amendment to the county's comprehensive land use plan. Such plan amendment may designate the entire county as one impact fee service area.

Section 9-251. When impact fees determined and collected.

- (a) Pursuant to Code of Virginia § 15.2-2323, the amount of impact fees to be imposed on a specific development shall be determined no later than final subdivision or site plan approval.
- (b) Pursuant to Code of Virginia § 15.2-2323, the impact fee shall be collected for each residential lot or housing unit at the time a building permit is issued for such lot or housing unit.
- (c) No building permit shall be issued for a lot or housing unit on which an impact fee has been imposed unless the owner of the lot or housing unit, or his agent, has (i) paid the applicable impact fee or (ii) has executed an agreement provided by the county and secured by a bond or a letter of credit approved by the county, to pay the impact fee, in equal installments, over a period of no more than 3 years. If payments are made in installments pursuant to subsection (c) (ii), interest on the unpaid portion shall accrue interest at the rate specified in § 9-6 of this Code.
- (d) The calculation of an impact fee may be appealed to the Chesterfield County Board of Zoning Appeals. Such appeal shall be filed with the director of planning within 30 days of the calculation of the impact fee amount by the county.

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Section 9-252. Determination of the amount of the impact fee.

- a) The impact fee for a development shall be determined by dividing (i) the projected road improvement costs within the impact fee service area in which the development is located, when such area is fully developed, by (ii) the number of projected housing units within the impact fee service area when such area is fully developed. This calculation shall be based on the number of trips generated by each such housing unit. The projected road improvement costs for each impact fee service area shall be calculated in accordance with the county's road improvement plan as specified in Code of Virginia §15.2-2321.
- b) The value of any dedication, contribution or construction from the developer for off-site road or other transportation improvements benefiting the impact fee service area shall be treated as a credit against the impact fees imposed on the developer's project whether by condition of zoning or other written commitment to the county. The county shall also calculate and credit against the impact fees the extent to which (i) other developments have already contributed to the cost of existing roads which will benefit the development, (ii) new development will contribute to the cost of existing roads, and (iii) new development will contribute to the cost of road improvements in the future other than through impact fees, including any special taxing districts, special assessments, or community development authorities.
- c) The schedule of impact fees is:
- | <u>Use</u> | <u>Impact Fee</u> |
|-------------|-------------------|
| Residential | \$5,820 |
| Commercial | \$ 0 |
| Industrial | \$ 0 |
- d) Any lot or housing unit which is subject to a transportation cash proffer or to increased taxes, assessments or fees for road improvements pursuant to a community development authority or a transportation service district, shall not be subject to the payment of impact fees.

Section 9-254. Updating road improvement plan and amending impact fees.

In accordance with Code of Virginia § 15.2- 2325, the Board of Supervisors shall update the impact fee road improvement plan at least every two years. The impact fee schedule shall be amended to reflect substantial changes in the road improvement plan. Any impact fees not yet paid at the time of the amendment to the impact fee schedule shall be assessed at the applicable amended amount.

Section 9-255. Use of impact fees.

A separate road improvement account shall be established for each impact fee service area and all funds collected through impact fees shall be deposited in the appropriate account. Each account shall bear interest which shall become funds of the account. The expenditure of

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funds from the account shall be only for road improvements benefiting the impact fee service area as set out in the road improvement plan for such impact fee service area.

Section 9-256. Refunds.

The county shall refund any impact fee in accordance with the requirements of the Code of Virginia § 15.2-2327.

(2) *That this ordinance shall become effective immediately upon adoption.*